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Factors Affecting the Probability of Academic Cheating School Students in Tehran

Ebrahim Khodaie^{a*}, Ali Moghadamzadeh^b, Keyvan Salehi^{a,b}^aAssistant Professor in Social Statistics, No. 218, Karimkhan St., National Organization for Educational Testing, Tehran, Iran^bPhD student of Educational Measurement, University of Allameh Tabatabaei, Tehran, Iran^{a,b}PhD student of Educational Measurement and Evaluation, University of Tehran, Tehran, Iran

Abstract

Academic cheating is an almost *new* subject in the field of education in *Iran* and its consequences are not visible. Cheating is known as an immoral activity in the academic environment to learn (McCabe & Derinan, 1999). In other countries, in the field of academic cheating have been many researches, indicating that important factors in the fraudulent behaviour of students are involved. Meanwhile, between cheating in schools and professional behaviour in the workplace is a close relationship despite of these evidences, there aren't sufficient field researches which identify the main factors of Cheating in schools. The purpose of this study is to identify Factors affecting the probability of academic cheating school students in Tehran. Twenty-fold from all regions sampled in Tehran that the method is a class type and groups relatively time is selected. The sample size is approximately 336 students. Results show that social and economic status, a commitment to discipline and rules and also history of cheating a significant relationship are related with the Possibility of cheating. According to the Regression logistic analysis, Factors like education level, age, quantitative study and education of father have a very important role in motivation of cheating. According to the results reported in 95% of students cheated on a test during the school year confessed, the amounts of people who have managed to cheat 70% have been reported. Understanding the reasons for cheating can be direct responses to people, hard materials, and teacher indifferences and at the end of a serious failure to lack of students study noted. More students who have a history of possible cheating committed fraud in the future for them are more than others.

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1. Introduction

The subject of cheating in the course of education has remained an untouched and ignored problem in the realm of researches and studies in Iran, and since its consequences can not be seen in the near future, one hardly takes it as

* Corresponding author. Tel.: +989125943513; fax: +982188922237.

E-mail address: Khodaie@yahoo.com

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a social problem. Philosopher Habermas sees cheating as an immoral behavior in educational environment (McCabe, & Derinan, 1999, p: 53). But here studying about cheating is important in two respects: first its consequences as a problem, and then its spread in educational environment. Spread of cheating in the course of education in Iran has not been adequately studied, and one can only dwell on his intuitive assessments. But studies in other countries show that cheating has spread in the recent years. (Davis et al, 1992). Cheating in universities has increasingly spread in the recent years, insofar as it has reached from 38 per cent in 1960 to 75 per cent in 1991, and students have admitted that they have began this behavior from the first years of their education (in school) (Kibler, 1993, p: 28) .

It should be mentioned that "if students find out that others are more successful in their works through cheating, a kind of demoralization will be developed, without really talking about it. And if cheating is not got under control, it provokes a feeling of injustice among individuals. In short, academic dishonesty should not be considered as a victimless crime" (Academic Integrity at the University of Alberta). In the end we have to point out that plagiarism is taken as a kind of professional perversions (Best and Luckenbill, 1994; Quinney 1964; Riemer, 1979; Ritzer and Walczak, 1986), and some of the plagiarists are seen as perverse intellectuals (Ben-Yehuda, 1985) who disrupt scientific norms and professional ethic (LaFollette, 1994; Footnotes, 1989).

2. Theoretical framework

In this part, we have gathered and draw the theories of some of the studies on cheating from 1965 to 2003. In this way, contemporary theories, along with the background of the subject, are considered. Studying and analyzing some of the researches carried out in the years between 1967 and 1998 in USA, Japan, and South Africa, Athanasou (2002) perceived that the variable of gender shows little influence on cheating. In another research, Whitley (2001), however, reported that cheating is equally spread between women and men, but at the same time he showed that women are less interested to cheating than men.

In his study dealing with 598 students, Tibbetts (1999) found out that the effect of his independent variable on the inclination to cheating is different in men and women. He notes that variables like self-control, feeling of ashamedness and being sinful, awareness about external punishments (severe penalties), and GPA impress the inclination to cheating. In their research, Prenshaw and others (2001) tried to examine academic probity and normality (or indecency) of cheating among the respondents. They divided the policies of probity in two kinds - clarity and explicitness of the policies and the amount of student's commitment to them -, both showing a negative relation with the normality of cheating. Examining cheating between 606 students of accounting in American universities in 2001, Smith (2002) and others point to the effect of demographic variables as well as cheating record. In their research, they also considered the effect of class preventions and the probability of cheating in the future.

In the studies carried out on 287 freshmen in the school of software engineering and computer sciences of Monash University and the school of information technology of Swinburne University by Sheard and others in 2001, as well as in those of S. C. Rennie and J. R. Crosby (2001) in the school of medicine of Dandi university on 676 students of medicine – from all academic years-, the results show that the proportion of students who admitted to cheating is varied from 2 percent for those who copied the answers in the exams to 56 per cent for those who used resources by quoting directly and just referring to them in References. In a study on 532 students of private universities, regarding the effect of gender on cheating, A. Hendershott, P. F. Drinan, and Cross (1999) point out that women are more probable to be caught out and probity and honesty play more important role in their abstention from cheating rather than men.

Jr. B. E. Whitley, A. B. Nelson, and Jones (1999) in their Meta-analysis of 48 surveys on the effect of gender on cheating or on individual inclination to it, report the effect of gender on cheating (respectively with r Pierson of 0.17 and 0.28) on the average 17 per cent and on the individual inclination 35 per cent. Examining 12 different classes of economy, which their students were selected by random sampling method, J. Kerkvliet and C. L. Sigmund (1999) found out that the GPA of students has an indirect relation with cheating, while the school grade shows a positive relation. Findings of D. L. McCabe and L. K. Trevino (1997) in a study on 1793 students from 9 universities implies that individual factors like GPA, gender, and age have impressed cheating. University of Northern Carolina (UNC) in 1997 set a questionnaire to consider justifiability of cheating among students. In this project Ball, Bowen, Kristi Brown, and Dumbell, (1997) found out that only 5 per cent of students saw cheating as an unacceptable action in

every situations, and 50 per cent of students replied that they are very likely to cheat for acquiring better mark in their homework.

For studying the characteristics of individuals who cheat in their exams, S. Tang, and J. Zuo (1997) asked from 282 students of 6 classes of 3 state universities to answer to their questionnaire. The results revealed that 39 per cent of students committed cheating, and among these students 69 per cent did so more than one time. Most of cheatings were done by men, and students with higher GPA less did so. In a survey on 291 bachelor students of Southern Utah University, J. Robison and C. Frederick (1997) studied demographic information, behaviors dealing with academic dishonesty, dishonesty in workplace, and hypocrisy in relationships. In a study on commercial companies with organizational codes in work ethic and those without organizational codes, McCabe and others (1996) found out that people who work in companies with organizational codes in work ethic committed less unethical behaviors than those who work in companies without these codes.

Maramark, Sheilah and Maline, Mindi Barth (1993) in three different researches considered cheating as a chronic problem, pointing out that 60 to 75 per cent of students had committed cheating. They note that cheating is strongly linked to positional specifications. In a study on 232 students of Rutgers University (New Jersey), Moffat (1990) notes that only 22 per cent of students had never committed cheating, however their most important reason was the fear of being caught. Moreover, cheating shows a reverse relation with the students' GPA. Baird (1980), in his study on 200 students of Bloomsburg State College, found out that in 75 per cent of surveyed students who had committed cheating, the variables like gender, school grade, GPA, and major of study play an important role in this behavior. In a survey of 392 students in two important universities of southern USA by Bonjean and McGee (1965), 78 per cent of students had confessed to at least one dishonest behavior in their university.

3. Hypothesis

Hypothesis is a supposition describing the relationship between two concepts or two phenomena which defined those concepts. In fact, hypothesis is a temporary answer to the initial research question but it has to be reviewed experimentally by the observed data (Kivy, 1999, pp. 12-131).

Test anxiety is directly related to the probability of cheating.

GPA is negatively related to the probability of cheating.

Social – economic status is related to probability of cheating.

Cheating record has a positive effect on probability of cheating.

Class control is negatively related to probability of cheating.

People's age is indirectly related to probability of cheating.

Learning motivation is directly related to the commitment to discipline.

Commitment to discipline is inversely related to probability of cheating.

Punishment severity in the educational atmosphere is indirectly related to probability of cheating.

Cheating probability is higher among the men rather than women.

4. Methodology

4.1. Variables measurement

"The variables of a scientific research are defined in two ways; first we should give the variables conceptual definitions. These definitions describe those qualities of variables which are independent of time and space, but can be used to distinguish between the relevant and irrelevant circumstances to the considered concept" (Carl Smith, Ellsworth & Aronson, 1976, cited in Cooper, 1979, pp. 24-5). After conceptual definition, these are the operational definitions which make the variables experimentally observable.

"Operational definition of a variable is a set of instructions which describes the observable circumstances, and gives the researcher the opportunity to verify the absence or presence of a concept in a given situation" (Reynolds, 1971, cited in Cooper, 2000, pp.24-5).

4.2. Information and data collection tools

The present study has employed questionnaire to collect the objective information from the people in the sample. To collect information, through which hypotheses are experimentally reviewed, one is required to make a tool. To this purpose, the present study has chosen the questionnaire as an indirect tool of observation. The design of the question package in the questionnaire has been modeled on Likert spectrum (in 5 or 6 parts).

4.3. Sampling

"While collecting data, the most crucial decision to make is sampling which is considered to be the research reference" (Williams, 1978, cited in Cooper, 2000, p. 53). As mentioned above, our sampling has included all twenty different districts of Tehran. Layer sampling is much analogous to the stratified sampling, with the distinction that here all the subgroups like gender, type of school (state / nonprofit school), school's grade, school's major, etc. are considered by the researcher and enjoy the same chance of being chosen [as variables]. In fact, layer sampling can represent the population the most and the best and, therefore, the results and estimations based on such sampling are more precise (Edwards, 2000, p.89).

4.4. Sample size

The sample size with the sampling error of 0.5 % and confidence level of 95 % includes 336 students based on the homogeneity of population (Dovas, 1997, p.79). But in the present study, due to the type of the questionnaire (written), and time and facility limitation, the sample consisted of 340 people, 37 of which were not included in the statistical analysis because some data were either missing or extraordinarily unbelievable.

4.5. Results of the factor analysis of the latent variables in research

While the data of the related index were analyzed through different extraction and rotations, the results remained the same, therefore, only the results of Principal Component and Direct Oblimin rotation methods have been reported. In all operations of the Factor analysis, Kaiser Criterion was valid. "This criterion for Factor analysis is quite common. According to this criterion one should choose a factor with Eigen value equal to one or more (Chalabi, 2002, p.198).

Table 4.5: the results of Factor analysis of the latent variables in the research

N	Factor	Determinant	KMO	Chi-Square	DF	Sig	CVE ^a
1	Cheating record (by person)	0.441	0.758	219.399	15	0.000	39.360
2	Attempted cheating (friends)	0.196	0.794	198.964	15	0.000	48.959
3	Probability of cheating	0.010	0.939	1306.585	45	0.000	53.891
4	Social Commitment	0.701	0.540	70.447	10	0.000	62.126

^a - Cumulative Variance Explained.

4.6. Reliability

Table 4-6: Reliability of latent variables (Cronbach's alpha)

	Variable	Question number	coefficient Alpha
1	Attempted cheating (in person)	28-29-31-32-33-34(A)	0.69
2	Attempted cheating (friends)	B28-29-31-32-33-34(B)	0.82
3	Probability of cheating	66-67-68-69-70-71-72-73-74-75	0.91
4	Social Commitment	54-55-59-60	0.64

5. Findings

5.1. Correlation analysis and probability of cheating

The relation between above variables and "probability of cheating" which is a dependent variable in the present study is shown in the below table.

Table 5.1: the relation between the probability of cheating and independent variables

Variables	correlation coefficient	significance	Number of observation
test anxiety	-0.058	0.315	299
Social and economic status	0.133	0.21	302
Commitment to discipline	-0.356	0.000	298
Cheating record	0.335	0.000	293
Age	0.038	0.521	293
Punishment severity	-0.138	0.018	293
Past performance (GPA)	-0.065	0.281	274
Class control	0.036	0.534	295
Other students' cheating	0.338	0.000	297

Test anxiety has shown a negative, very poor, and insignificant correlation. Turning to the social- economic status, the correlation is still poor but quite significant which means the probability to cheat is higher for students of higher status in comparison with those of lower status.

Commitment to discipline has been indirectly related to the probability of cheating with the coefficient of 0.356 and significance of 0.01. Thus, the more people are committed to discipline, the less cheating is probable. Class control is considered to have a poor relation with cheating probability with unacceptable significance. But cheating record is reported to be directly and significantly related with cheating probability. It shows the relation between the willingness to do something and commitment to that. Age as a variable has indicated a very poor and insignificant correlation. It seems that the low variance of the age is one of the reasons from statistical point of view for showing poor correlation. The severity of the punishment shows poor, negative, and significant relation, that is to say the more severe punishment the less probability for cheating. The poor correlation of this variable might be explained with the perceived chaos in the school discipline. Past performance or students' average is in poor, indirect, and insignificant relation with the mentioned variables. Other students' commitment to cheating indicates a direct, quite mean relation with the probability of cheating but with suitable level of significance. In other words, the higher the average of cheating among students of a class, the higher the probability of cheating would be in that class.

5.1.1. Cheating record

The below table indicates the relation or correlation coefficient between cheating (dependent variable) record and other independent variables in the present study.

Table 5.1.1: the relation between cheating record, age, and social-economic status

<i>Variables</i>	Correlation coefficient	significance	Number of observation
Age	0.048	0.469	286
Social- Economic status	0.153	0.009	294

As it is shown in the above table, age as a variable is very poorly and insignificantly related to the "cheating record", which could be because of low variance of this variable from the statistical point of view. But other variables are significantly related to the "cheating record". This relation is poor but highly significant for "socio-economic status". That is to say students of higher status have committed cheating more than those of lower status.

5.1.2. learning Motivation

Learning motivation is among those variables which have been measured through its relation with pro cheating norms, neutralization, and commitment to discipline. Results are shown in the below table.

Table 5.1.2: the relation between learning motivation and commitment to discipline

<i>Variables</i>	Correlation coefficient	Significance	Number of the observation
Commitment to discipline	0.368	0.000	296

5.2. Logistic Regression Analysis

Using the information collected from a set of independent variables, the values of the dependent variable are predicted through this method. To sum up "Multiple Regression is based on this fact that the more we know about a person, the more we can make guess about his/her characteristics" (Davos, 1997, p.214).

5.2.1. The Equation of effective Independent Variables Regression on the Probability of cheating

To this aim, the independent variables are computed by Enter as the method, and the findings suggest that only the five variables in the table 5.2.1 are significant.

Table 5.2.1: Logistic Regression Model for the probability of cheating among school students in Tehran

<i>Variables</i>	B	Wald
Gender	.1550	.2380
School grade	-0.510	2.926
Age	.4270	2.746
Quantity of study	-0.001	2.234
GPA	-0.047	.311
Father's education	.0870	5.147
Constant	-5.890	1.792
Chi-square	11.342	
Nagelkerke R Square	.072	
-2 Log likelihood	269.792(a)	
Percentage Correct	60.0	

According to the above table the equation of logistic regression for cheating probability is as follows:

The probability of cheating = $-5.89 + (-0.051) \text{ school grade} + (0.427) \text{ age} + (-0.001) \text{ quantity of study} + (0.087) \text{ father's education}$.

Therefore one can say the probability of cheating is higher among the students with educated fathers and low hours of study. But there is a conflict in the analysis of the age and school grade of the students which shows a sort of parabolic relationship between the two variables.

6. Conclusion

Based on the above discussion, one could say that 95.6 per cent of the students have confessed to commit cheating in their exams or homeworks during one academic year (2002-2003). In this regard, 95.8 per cent of the students have mentioned cheating committed by their friends but, when they were asked about the quantity of cheating among students, they thought that 70 per cent of the students generally cheat during the exams. Motivations and reasons that the students have mentioned for cheating are being offered in two parts; first part includes samples' direct answers as difficult school subjects, not taking the teacher seriously, and lack of self-study. The significant statistical correlations and the research study confirm these reasons. Also it has been proved that students with records of cheating are the most probable cheaters in future. Educational environments with more severe punishment for cheating are reported to have lower probability of cheating.

Students of higher socio- economic status have reported their probability to cheat more than the others. But respondents with more inner motivation to learn were more committed to discipline and less probable to cheating. Finally, the consequence of this behavior, i.e. cheating, as other researchers have reported in their studies, could be traced in unethical, non-professional behaviors which have been discussed in detail in the section of "contemporary research and theories". On the other hand, these people are turning gradually irresponsible to the concepts like justice, respect for others' rights, etc. and even facing dishonesty in their very close and intimate relationships. As suggested above, cheating does damage the inter-personal trust (Lickona, 1991, p.77, cited in Niles, 1996, p.23).

The three levels of macro, middle, and micro will be taken into the consideration in the final section (according to the variables of analytical model). Social structure, norm-making, and issues regarding the character will be discussed in first, second, and third part respectively.

At the macro level and in the social systems which are based on general and universal social consensus, personality systems expected to reflect generalized emotional dependence, generalized collective identity, generalized internal commitment, rationalism, and universalistic orientation toward Social and cultural objects according to Parsons. Therefore the mission of such subjectivity of the emotion toward all members of a general "we" is quite the same according to the internalized ethical principles (Theoretical ethics). Social control in the consensus order is more based on the sense of shame and guilt rather than fear and horror because in such an order peoples' conduct is regulated through internal commitment and self-regulation and the deviation from the social rules will be less probable (Chalabi, 1993, p.20).

As discussed above, informal and internal penalties like the sense of guilt is more effective. In his sociological analysis, Kemper has recounted 5 distressful emotions; sense of guilt, shame, anxiety, depression, and anger as the products of social relation. From his point of view a person will feel guilty when his/her behavior is not in accordance with internalized ethical values (Chalabi, 1993, p. 21). F. Nye also believes that internal control acts through socialization of the child and conscience formation; i.e. internalization of the norms, values, and shame and guilt feeling in the case of deviation as effective ways of social control and supervision especially in family (Momtaz, 2002, p.123).

According to Durkheim a social norm is consisted of two essential factors; social commitment and social need (Chalabi, 1996, p.109, et al.1986). Regarding the honesty, the norms should justifiably be internalized through specialized methods. Moreover, an internal control system should be created by normal pressure and informal punishment, to enforce its operational guarantee by formal and definite punishment (Rafi'pour, 1999, pp. 255-6). In other words, the cost of the action should be rationally much more than the benefit of abnormality. Yet following below points will reduce cheating at the experimental and practical level: Students should be clear about

expectations like honesty, other important values, and the certain consequences they will face in the case of breaking the rules.

The principles of honesty and trustworthy should be elaborated for the students through apparent and evident examples (for instance: how far to receive help is permitted in the final reports? Are they allowed to collaborate with each other? What is the regulation or protocol for the shared tasks? Are they allowed to share their projects with other students, and if yes how far? If they are permitted to collaborate in group projects, how the reports should be written?

Above all, students should be responsive toward their choices (accountability). Creation of an atmosphere based on honesty and trustworthy as the main norm of the small and large groups and the main criterion of the academic identity should be considered in policy making. Learning passion and truth seeking should be considered in all class activities within and without. To promote the standards during academic years, committees, research programs, and annual lectures on the subject could be helpful. Students should be aware of the importance of academic honesty for the high school staff. And teachers should feel obliged to respond to cheaters in proper time and way. Students should be reminded of other choices like receiving consult to overcome stress, depression, and family crisis in difficult situations (the situations which are almost excuses for justifying cheating) rather than cheating.

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